

Abstract

The invention relates to an electric camshaft adjuster for adjusting and securing the phase angle of a camshaft of an internal combustion engine with respect to its crankshaft, having a three shaft gearing which is embodied as a harmonic drive (19, 19') of sleeve design, and a drive wheel (1) which is fixed to the crankshaft and has a first ring gear (2) as well as an output component (4) which is fixed to the camshaft and has a second ring gear (5) arranged next to the first ring gear (2) and an adjustment shaft (10, 10', 10'', 10''') which can be driven by an electric adjustment motor, with a wave generator (17, 17', 17'') which has means for elliptically deforming a flexurally elastic, externally toothed sleeve (18).

A way of improving a harmonic drive of sleeve design is for the expenditure on the construction of the harmonic drive (19, 19') to be lowered by changes to the wave generator (17, 17', 17''), and for the axial installation space thereof to be lowered by integrating the ring gears (2, 5) into the drive wheel (1) and output component (4) which are pushed axially one into the other.

Figure 1